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The Effect of Stunting Early Detection (Stulytion) Website on The Level of Balanced Nutritional Knowledge In Mothers of Toddlers Aged 12-59 Months At The Kebonarum Klaten Health Center

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ABSTRACT

Background: Children under five are children aged 12 - 59 months In Indonesia, the prevalence of stunting is expected to be 21.6% in 2022.Maternal knowledge is the factors influencing nutritional needs fulfillment behavior among children under 5 years of age. Stunting Early Detection (Stulytion) Website is a website developed by researchers that contains information that can affect the level of knowledge of balanced nutrition of toddler mothers which later can also contribute to improving the fulfillment of nutrition for their toddlers.
Objective: To determine the Effect of Stunting Early Deetection (Stulytion) Website on the Level of Knowledge of Balanced Nutrition in Mothers of Toddlers Aged 12-59 Months at the Kebonarum Klaten Health Center
Method: This research is a type of quantitative research using a one group pre-test post-test design. The sampling technique with the cluster sampling method obtained the number of respondents 83 mothers of toddlers aged 12-59 months. The data analysis technique used Wilcoxon's non-parametric statistics with a significance level of 0.05.
Result: There is an influence of the Stunting Early Detection (Stulytion) Website on the level of knowledge of mothers of toddlers aged 12-59 months at the Kebonarum Klaten Health Center with a p value of 0.000 ($p < 0.05$).
Conclusion: There is an influence of the Stunting Early Detection (Stulytion) Website on the level of knowledge of mothers of toddlers aged 12-59 months at the Kebonarum Klaten Health Center.

Keywords: ***stunting, knowledge of balanced nutrition, mother of toddlers, stunting early detection website***

INTRODUCTION

Stunting is a nutritional issue in toddlers that remains unresolved. According to the WHO (2020), stunting refers to a condition where a child's length or height is significantly below the expected standard for their age, measuring less than -2 standard deviations (SD) on the growth curve. Presidential Regulation (Perpres) Number 18 of 2020 stipulates stunting as a national problem so that stunting reduction is a priority agenda for national development. The government's strategy in handling stunting is carried out through the 2020-2024 National Medium-Term Development Plan (RPJMN), with a target of stunting prevalence rate to drop to 14% by 2024.[1]

Indonesia is among the countries with the highest incidence of stunting globally. According to the 2022 Indonesian Nutrition Status Survey (SSGI) conducted by the Health Development Policy Agency of the Ministry of Health of the Republic of Indonesia, the stunting prevalence rate in 2022 was 21.6%.[2] Meanwhile, the Head of the Klaten Regency Health Office, Central Java, Dr. Anggit Budiarto, M.MR, reported that stunting in Klaten has been increasing**.** In 2020, the stunting rate was 10.3%. Then, in 2021 it rose to 15.8%, then in 2022 it rose to 18,2%.[2]According to WHO, the impact caused by stunting can be divided into short-term impacts, including an increase in the incidence of pain, death, impaired motor development, suboptimal verbal in children, and increased costs and decreased health. Meanwhile, the long-term effects of stunting include suboptimal posture in adulthood (shorter than in general), and decreased reproductive health (WHO, 2018).

Children under five are children aged 12 - 59 months (Ministry of Health, 2021). Toddler health efforts include management and referrals, nutrition, growth and development monitoring, immunization, rehabilitation and long-term care in chronic/rare diseases, parenting and developmental stimulation, and the provision of a healthy and safe According to the Ministry of Health of the Republic of Indonesia (2022), stunting is also caused by a combination of several factors that develop over time. These include prolonged chronic malnutrition, growth problems during pregnancy, insufficient protein intake relative to total calorie needs, hormonal changes due to stress, and frequent infections early in a child's life.[3]

Lack of maternal knowledge about balanced nutrition is one of the supporting factors for stunting in toddlers. This is corroborated by the findings of a 2021 study published in the Journal of Public Health Research titled Behavior in Fulfilling Nutritional Needs for Indonesian Children with Stunting: Related Culture, Family Support, and Mother's Knowledge. The study highlights that cultural practices, family support, and maternal knowledge are significant factors influencing the nutritional behavior of children under five with stunting. A lack of awareness regarding balanced nutrition is identified as a key reason for insufficient information on proper nutritional practices.[4]

Over the past five years, Information and Communication Technology (ICT) in Indonesia has experienced significant growth. According to the Central Java Province's BPS report (2020), the proportion of the population using mobile phones in 2020 reached 62.84 percent. Consequently, utilizing electronic media as a tool to enhance the knowledge of mothers with children under five about balanced nutrition is expected to yield effective results**.**[5]This is supported by research by in the Journal of Food, Health and Nutrition with the title of the article Increasing Mother's Knowledge About Nutrition to Overcome Malnutrition in Children Under Five Years Old with the "Healthy Kids Eat Healthy (EMAS)" application. The results

showed that the knowledge of the research subjects after being given the GOLD Application increased to 84.35% on average. Therefore, it can be concluded that there is a significant increase in the knowledge of mothers under five about nutrition before and after being given the GOLD application ($p< 0.05$).[6]

Based on the journal, it has been proven that the use of technology can affect the level of knowledge. The Stunting Early Detection Website is a form of technology-based innovation as an effort to mobilize the level of balanced nutritional knowledge in mothers under five so that it can make a real contribution to reducing the stunting rate in toddlers. In the Stunting Early Detection Website, there are various menus to affect the level of knowledge of mothers under five about the importance of balanced nutritional intake. Users can easily access the Stunting Early Detection Website through the search page on Google. Information about the importance of balanced nutritional intake is presented in the form of audio visuals. The audio-visual form consists of balanced nutrition education videos and posters about nutrition.

In the Stunting Early Detection Website, there are various menus to affect the level of knowledge of mothers under five about the importance of balanced nutritional intake. Users can easily access the Stunting Early Detection Website through the search page on Google. Information about the importance of balanced nutritional intake is presented in the form of audio visuals. The audio-visual form consists of balanced nutrition education videos and posters about nutrition.

METHODS

This study is a quantitative research employing a one-group pre-test post-test design. The sampling technique utilized was cluster sampling, resulting in a total of 83 respondents, all mothers with children aged 12 to 59 months. The data analysis technique used by Wilcoxon's non-parametric statistics with a significance level of 0.05.

RESULT

The following are the results of research is.

Table 1. Frequency distribution of Respondent Characteristics Based on Age, Parity, Education Level and Work.

Characteristics	Frequency	Percentage
Age		
<20 years old	2	2,4%
20-35 years old	63	75,9%
>35 years old	18	21,68%
Total	83	100%
Parity		
P1A0	36	43,37%
P2A0	25	30,12%
P3A0	16	19,27%
P4A0	5	6,02%
P3A1	1	1,2%
Total	83	100%
Education Level		
Primary School	3	3,61%
Junior High School	11	13,25%
Senior High School	53	63,85%
College	16	19,27%
Total	83	100%
Work		
Housewives	58	69,87%
Civil Servants	2	2,40%
Private Employees	9	10,84%
Laborer	8	9,63%
Merchant	2	2,40%
Self Employee	4	4,81%
Total	83	100%

Based on table 1, it shows that out of a total of 83 respondents studied, from the age data, most of the respondents were 20-35 years old, as many as 63 respondents (75.9%). From the education data, most of the respondents had the last high school education as many as 53

respondents (63.85%). From the parity data, most of the respondents with P1A0 parity were 36 respondents (43.37%). From the employment data, most of the respondents were housewives (IRT) as many as 58 people (69.87%). Based on table 4.1, it shows that out of a total of 83 respondents studied, from the age data, most of the respondents were 20-35 years old, as many as 63 respondents (75.9%). From the education data, most of the respondents had the last high school education as many as 53 respondents (63.85%). From the parity data, most of the respondents with P1A0 parity were 36 respondents (43.37%). From the employment data, most of the respondents were housewives (IRT) as many as 58 people (69.87%).

Table 2. Knowledge Level of Toddler Mothers Aged 12-59 Months Before and After Intervention with Stunting Early Detection (Stulytion) Website

Knowledge	**Category**					
	Good		**Enough**		**Less**	
	f	**%**	**f**	**%**	**f**	**%**
Before Intervention	19	22,89	52	62,65	12	14,45
After Intervention	70	84,33	10	12,04	3	3,61

Based on the data of table 2, it shows that before being given an intervention using the Stunting Early Detection (Stulytion) Website on balanced nutrition, as many as 83 respondents had criteria for a good level of knowledge as many as 19 mothers under five (22.89%), sufficient knowledge as many as 52 mothers under five (62.65%), and insufficient knowledge as many as 12 mothers under five (14.45%). Then after being given an intervention with Stunting Early Detection (Stulytion), the website experienced a change in the level of knowledge to those who had a good level of knowledge as many as 70 mothers under five (84.33%), the level of knowledge was sufficient as 10 mothers under five (12.04%), and the level of knowledge was insufficient as many as 3 mothers under five (3.61%).

Table 3. Analysis of the effect of Stunting Early Detection (Stulytion) Website using the Wilcoxon test

Variable	N	Mean	Standard Deviation	P-value
Pre-test Balanced Nutrition Knowledge	83	71,61	12,39	0,000
Post-test Balanced Nutrition Knowledge	83	86,74	10,94	

Based on table 4.4, it is known that the results of the Wilcoxon test of the level of knowledge before and after being given the intervention with the Stunting Early Detection (Stulytion) Website obtained a significance value of 0.000 ($p < 0.05$). It can be concluded that there is an effect of Stunting Early Detection (Stulytion) Website on the level of knowledge of mothers under five years old aged 12-59 months at the Kebonarum Klaten Health Center and Ha is declared accepted. This is reinforced by the average difference in knowledge level of 15.13 points.

DISCUSSION

In this study, the knowledge of mothers under five years showed that before the intervention was given using the Stunting Early Detection (Stulytion) Website about balanced nutrition, as many as 83 respondents had criteria for a good level of knowledge as many as 19 mothers under five (22.89%), sufficient knowledge as many as 52 mothers under five (62.65%), and less knowledge as many as 12 mothers under five (14.45%). Then after being given an intervention with Stunting Early Detection (Stulytion), the

website experienced a change in the level of knowledge to those who had a good level of knowledge as many as 70 mothers under five (84.33%), the level of knowledge was sufficient as 10 mothers under five (12.04%), and the level of knowledge was insufficient as many as 3 mothers under five (3.61%). There was an increase in the level of maternal knowledge from enough to good and from less to enough. This can be proven based on table 4.5 the average maternal knowledge increased before the intervention was given, the average maternal knowledge about balanced nutrition was 71.61 points. Meanwhile, after being given the intervention, the average mother's knowledge about balanced nutrition increased to 86.74 points. This aligns with the research conducted by Novita (2020) in an article titled "The Effects of Using Audio-Visual Media on Increasing Mothers' Knowledge of Stunting at Rawasari Health Center in Jambi City in 2019." The article reports that out of 40 respondents, 20% had good knowledge during the pretest, which increased to 55% in the posttest. Additionally, 25% of respondents had moderate knowledge of stunting in the pretest, which rose to 32.5% in the posttest. Meanwhile, 55% of respondents had limited knowledge during the pretest, which decreased to 12.5% in the posttest.

In this study, the results were obtained that there was an effect of Stunting Early Detection (Stulytion) Website on the level of balanced nutritional knowledge in mothers under five years old aged 12-59 months at the Kebonarum Klaten Health Center. This can be seen from the p value of 0.000 with a $p<0.05$ which means that there is an effect of Stunting Early Detection (Stulytion) Website on the level of balanced nutritional knowledge in mothers under five aged 12-59 months at the Kebonarum Klaten Health Center.

Stunting Early Detection (Stulytion) Website is an information media that provides information about balanced nutrition in the form of posters and educational videos. Users can more easily understand the delivery of information through audio visuals. Users can gain knowledge about balanced nutrition from the sensing results. Knowledge is the outcome of sensory experiences processed by humans, primarily involving the senses of hearing and sight. The majority of an individual's knowledge is acquired through these senses hearing (ears) and sight (eyes). The level or intensity of a person's knowledge about an object can vary.[7]Consists of knowing, understanding, application, analysis, synthesis, and evaluation.[8]Based on the theory of the cone of experience by Edgar Dale in an article explained that with the learning method using audio or text alone, the information that can be remembered is only 10-20%. With the use of pictures or videos, it is possible to retain up to 30% of the information presented.[9] This aligns with research findings indicating that audio-visual media is more effective than leaflets in enhancing the knowledge and attitudes of mothers with undernourished children under five at the Medan Sunggal Health Center.[10] Furthermore, the results of this study are consistent with research demonstrating that the use of educational videos significantly impacts both the knowledge (p-value = 0.000) and attitudes (p-value = 0.000) of mothers with children under five in Ngepung Village.[11]Additionally, this study is supported by research showing that educational cartoon media significantly influences mothers' knowledge about child nutrition (p-value = 0.000 <0.05).[12]

CONCLUSION

Characteristics of the respondents, out of a total of 83 respondents, it was found that almost all of the respondents were in the age of 20-35 years, as many as 63 mothers

under five years old aged 12-59 months (75.9%). Most of the respondents had high parity with a total of 47 respondents (56.61%) with more than one parity. Most of the respondents had the last education of high school (SMA) as many as 53 respondents (63.85%) and most of the mothers did not work or as housewives (IRT) as many as 58 respondents (69.87%). The results of this study showed that the average value of knowledge about balanced nutrition before being given the Stunting Early Deetection (Stulytion) Website intervention was 71.61 and then after the intervention increased to 86.74. 3. There is an effect of Stunting Early Deetection (Stulytion) Website on the level of balanced nutritional knowledge in mothers under five years old aged 12-59 months at the Kebonarum Klaten Health Center which is evidenced by the results of the analysis using Wilcoxon obtained a sig value = 0.000 ($p<0.05$).

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REFERENCES

1. Peraturan Presiden (Perpres) Nomor 18 Tahun 2020 tentang Rencana Pembangunan Jangka Menengah Nasional tahun 2020-2024 17 Januari 2020
2. Badan Kebijakan Pembangunan Kesehatan Kemenkes RI. (2022). *Buku Saku Hasil Survei Status Gizi Indonesia (SSGI) 2022*. Kemenkes RI.
3. Direktorat Gizi Masyarakat. (2022). *Hasil Pemantauan Status Gizi (PSG) Tahun 2022*. Kemenkes RI.
4. Wiliyanarti, P. F., Wulandari, Y., & Nasrullah, D. (2022). Behavior in fulfilling nutritional needs for Indonesian children with stunting: Related culture, family support, and mother's knowledge. *Journal of Public Health Research*, *11*(4). https://doi.org/10.1177/22799036221139938
5. BPS Provinsi Jawa Tengah. (2020). *Profl Kesehatan Provinsi Jawa Tengah 2020*. *1*(1).
6. Nazilia Ni'ma, & Iqbal Muhammad. (2020). Peningkatan Pengetahuan Ibu Tentang Gizi Untuk Mengatasi Gizi Buruk Pada Anak Balita Dengan Aplikasi "Anak Sehat Makan Sehat (EMAS)." *Jurnal Pangan Kesehatan Dan Gizi* , *1*, 46–53.
7. Notoatmodjo. (2010). *Promosi Kesehatan Teori & Aplikasi* (8th ed.). Rineka Cipta.
8. Notoatmodjo. (2014). *Promosi Kesehatan Teori & Aplikasi*. Rineka Cipta
9. Jackson J. (2016). *Myths od Active Learning : Edgar Dale And The Cone Of Experience* . *20*(2).
10. Mardhiah, A., Riyanti, R., Promosi Kesehatan, D., Farmasi dan Kesehatan, F., Kesehatan Helvetia Medan, I., Kesehatan Reproduksi, D., & Kesehatan Masyarakat, F. (2020). Effect Of Audio Visual Media Awareness And Knowledge And Attitude Towards Women Children Less Nutrition In The Health Field Medan Sunggal. In *Jurnal Kesehatan Global* (Vol. 3, Issue 1).

11. Dwi, K., & Afifah, A. (2023). *EduTing(Eduksi Stunting) Dengan Media Video untuk Meningkatkan Pengetahuan dan Sikap Ibu Balita di Desa Ngepung Kabupaten Nganjuk*. https://journal.unnes.ac.id/sju/index.php/nutrizione/

12. Suprapto, S. (2022). Pengaruh Edukasi Media Kartun Terhadap Peningkatan Pengetahuan Ibu dan Status Gizi Anak. *Journal of Health (JoH)*, *9*(2), 81–87. https://doi.org/10.30590/joh.v9n2.500